

CLAIMS

What is claimed is:

1. A sliding piston opening means comprising:
a length of tube with one or more openings through part of the length; and
a sliding piston with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube and movable from a first closed position to a second open position;
wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with a sealed end and an open end and with approximately the same inside diameter as the outside diameter of the length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.
2. A sliding piston opening means as in claim 1, wherein said sliding piston has an elliptical shaped profile.
3. A sliding piston opening means as in claim 1 or 2, wherein said opening in said length of tube is one or more slits through a portion of the length of tube.
4. A sliding piston opening means as in claim 1 or 2, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

5. A sliding piston opening means as in claim 1 or 2, wherein said length of tube and said compressible elongated tubular housing are formed as a single unit with the length of tube in the form of a reduced diameter within the compressible elongated tubular housing.

6. A sliding piston opening means comprising:
a compressible elongated tubular housing with a sealed end and an open end with a restriction between its two ends; and

a sliding piston with a sealing diameter approximately that of the restriction disposed within said compressible elongated tubular housing at said restriction and movable from a closed position at the restriction to an open position away from the restriction;

wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.

7. A sliding piston opening means as in claim 6, wherein said sliding piston has an elliptical shaped end.

8. A sliding piston opening means as in claim 6 or 7, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

9. A sliding piston opening means comprising:

a first length of tube;

a second length of tube with an opening through its length; and

a sliding piston with a sealing diameter between its two ends approximately that of the inside diameter of the first length of tube disposed within said first length of tube and movable from said first length of tube to said second length of tube;

wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with a sealed end and an open end and with approximately the same inside diameter as the outside diameter of the first length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.

10. A sliding piston opening means as in claim 9, wherein said sliding piston has an elliptical shaped profile.

11. A sliding piston opening means as in claim 9 or 10, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

12. A sliding piston opening means comprising:
a length of tube; and
a sliding piston defining a through opening through it and with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube and movable from a first sealing position within the tube to a second open position outside of the tube;

wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with a sealed end and an open end and with approximately the same inside diameter as the outside diameter of the length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.

13. A sliding piston opening means as in claim 12, wherein said sliding piston is made of a flexible material wherein in the first sealing position it has a circular profile and a closed opening and wherein in the second open position it has an elliptical profile and an opened opening.

14. A sliding piston opening means as in claim 12 or 13, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

15. A sliding piston opening means as in claim 12 or 13, wherein said length of tube is formed as part of the compressible elongated tubular housing in the form of a restriction in the compressible elongated tubular housing.

16. A sliding piston opening means comprising:
a length of tube with one or more openings through part of the length; and
a sliding piston with an applicator tip affixed to one end and with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube with the applicator tip disposed toward the opening in the length of tube and

movable from a first closed position with the applicator tip substantially within the length of tube and to a second open position with the applicator tip substantially exposed outside of the length of tube;

wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with a sealed end and an open end and with approximately the same inside diameter as the outside diameter of the length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.

17. A sliding piston opening means as in claim 16, wherein said opening in said length of tube is one or more slits through a portion of the length of tube.

18. A sliding piston opening means as in claim 16 or 17, wherein said length of tube is formed as part of the compressible elongated tubular housing in the form of a restriction near the open end of the compressible elongated tubular housing.

19. A sliding piston opening means comprising:
a length of tube with one or more openings through part of the length; and
a sliding piston with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube and movable from a first closed position to a second open position;

wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with approximately the same inside diameter as the outside diameter of the length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing between the sliding piston opening means and a viscous substance whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close an air path from the outside atmosphere to the enclosed fluid.

20. A sliding piston opening means as in claim 19, wherein said sliding piston has an elliptical shaped end.

21. A sliding piston opening means as in claim 19 or 20, wherein said opening in said length of tube is one or more slits through a portion of the length of tube.

22. A sliding piston opening means as in claim 19 or 20, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

23. A sliding piston opening means comprising:

- a first length of tube with an opening through part of the length;
- a first sliding piston with a sealing diameter approximately that of the inside diameter of the first length of tube disposed within said first length of tube and movable from a first closed position to a second open position;
- a second length of tube with an opening through part of the length; and
- a second sliding piston with a sealing diameter approximately that of the inside diameter of the second length of tube disposed within said second length of tube and movable from a first closed position to a second open position;

wherein said first length of tube and said second length of tube are affixed inside an elongated tubular housing with approximately the same inside diameter as the outside diameter of the first length of tube and wherein a fluid is enclosed within the elongated tubular housing between said first length of tube and said second length of tube thereby sealing the fluid within the elongated tubular housing whereby the sliding piston opening means are operated by squeezing the elongated tubular housing at or near the sliding piston to open and close an air path from the outside atmosphere to the enclosed fluid.

24. A sliding piston opening means as in claim 23, wherein said opening in said first and second length of tubes is one or more slits through about half of the first and second length of tubes.

25. A sliding piston opening means as in claim 23 or 24, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

26. A sliding piston opening means as in claim 23 or 24, wherein said first and second length of tube is formed as part of the elongated tubular housing as two restrictions in the elongated tubular housing.

27. A sliding piston opening means comprising:
an elongated tubular housing with an open end and a sealed end wherein said open end has a notch; and
a sliding piston with a sealing diameter approximately that of the inside diameter of the elongated tubular housing disposed within said elongated tubular housing and movable from a first closed position to a second open position;
wherein a fluid is enclosed within the elongated tubular housing near the sealed end separated from the open end of the elongated tubular housing by said sliding piston thereby

sealing the fluid within the elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the elongated tubular housing.

28. A sliding piston opening means as in claim 27, wherein said sliding piston has an elliptical shaped profile.

29. A sliding piston opening means as in claim 27 or 28, wherein an elongated member is disposed inside the elongated tubular housing with the fluid.

30. A sliding piston opening means as in claim 27 or 28, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

31. A sliding piston opening means as in claim 27 or 28, wherein said elongated tubular housing is disposed inside a second elongated tubular housing wherein an applicator is affixed to an open end of said second elongated tubular housing.

32. A sliding piston opening means as in claim 31, wherein said open end of said second elongated tubular housing has a smaller diameter than the diameter of said second elongated tubular housing.

33. A sliding piston opening means as in claim 32, wherein an applicator is affixed to said open end of said second elongated tubular housing.

34. A sliding piston opening means as in claim 31, 32, or 33, wherein said elongated tubular housing and said second elongated tubular housing are formed as a single unit wherein the elongated tubular housing is formed as a reduced diameter section within the second elongated tubular housing.

35. A sliding piston opening means comprising:
a first elongated tubular housing with an open end;

a second elongated tubular housing with an open end and a sealed end disposed within said first elongated tubular housing; and

a sliding piston with a sealing diameter approximately that of the inside diameter of the second elongated tubular housing disposed within said second elongated tubular housing near said open end and movable from a first closed position to a second open position;

wherein a fluid is enclosed within the second elongated tubular housing near the sealed end separated from the open end of the second elongated tubular housing by said sliding piston thereby sealing the fluid within the second elongated tubular housing whereby the sliding piston opening means is operated by squeezing the elongated tubular housings at or near the sliding piston to open and close a fluid path from the fluid to the open end of the second elongated tubular housing.

36. A sliding piston opening means as in claim 35, wherein said sliding piston has an elliptical shaped profile.

37. A sliding piston opening means as in claim 35 or 36, wherein an elongated member is disposed inside the elongated tubular housing with the fluid.

38. A sliding piston opening means as in claim 35 or 36, wherein an applicator is affixed to one or more ends of said first elongated tubular housing.

39. A sliding piston opening means as in claim 35 or 36, wherein said open end of said first elongated tubular housing has a smaller diameter than the diameter of said first elongated tubular housing.

40. A sliding piston opening means as in claim 39, wherein an applicator is affixed to said open end of said first elongated tubular housing.

41. A sliding piston opening means comprising:

an elongated tubular housing with an open end and a sealed end with a greater inside diameter near its open end than near the sealed end; and

a sliding piston with a sealing diameter smaller than the inside diameter of the elongated tubular housing near the open end and greater than the approximately that of the inside diameter of the seal end disposed within said elongated tubular housing near said open end and movable from a first closed position to a second open position;

wherein a fluid is enclosed within the elongated tubular housing near the sealed end separated from the open end of the second elongated tubular housing by said sliding piston thereby sealing the fluid within the elongated tubular housing whereby the sliding piston opening means is operated by squeezing the elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the elongated tubular housing.

42. A sliding piston opening means as in claim 41, wherein said sliding piston has an elliptical shaped profile.

43. A sliding piston opening means as in claim 41 or 42, wherein an elongated member is disposed inside the elongated tubular housing with the fluid.

44. A sliding piston opening means as in claim 41 or 42, wherein an applicator is affixed to a tube affixed partially within said open end of said elongated tubular housing.

45. A sliding piston opening means comprising:
a short length of tube; and
a sliding piston with a sealing diameter approximately that of the inside diameter of the short length of tube disposed within said short length of tube and movable from a first closed position to a second open position;

wherein the sliding piston opening means is affixed inside a compressible elongated tubular housing with a sealed end and an open end and with approximately the same inside diameter as the outside diameter of the short length of tube and wherein a fluid is enclosed within the compressible elongated tubular housing near the sealed end separated from the open end of the compressible elongated tubular housing by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing at or near the sliding piston to open and close a fluid path from the fluid to the open end of the compressible elongated tubular housing.

46. A sliding piston opening means as in claim 45, wherein said sliding piston has an elliptical shaped profile.

47. A sliding piston opening means as in claim 45 or 46, wherein said elongated tubular housing has one or more ends that are covered with an applicator.

48. A sliding piston opening means as in claim 45 or 46, wherein said open end of said elongated tubular housing has a smaller diameter than the diameter of said elongated tubular housing.

49. A sliding piston opening means as in claim 48, wherein an applicator is affixed to said open end of said elongated tubular housing.

50. A sliding piston opening means as in claim 45 or 46, wherein said short length of tube and said compressible elongated tubular housing are formed as a single unit wherein the short length of tube is formed with as reduced diameter section within the second elongated tubular housing.

51. A sliding piston opening means comprising:

a first elongated tubular housing with a seal end and an open end;

a second elongated tubular housing with a cylindrical wall, a sealed end, and an opening on the cylindrical wall near the other end; and

a sliding piston with a sealing diameter approximately that of the inside diameter of the second elongated tubular housing disposed within said second elongated tubular housing and movable from a first closed position to a second open position;

wherein a fluid is enclosed within the second elongated tubular housing near the sealed end separated from the opening by said sliding piston thereby sealing the fluid within the second elongated tubular housing whereby the sliding piston opening means is operated by squeezing the elongated tubular housings at or near the sliding piston to open and close a fluid path from the fluid to the opening of the second elongated tubular housing.

52. A sliding piston opening means as in claim 51, wherein said sliding piston has an elliptical shaped profile.

53. A sliding piston opening means as in claim 50 or 51, wherein an elongated member is disposed inside the elongated tubular housing with the fluid.

54. A sliding piston opening means as in claim 50 or 51, wherein said first elongated tubular housing has one or more ends that are covered with an applicator.

55. A sliding piston opening means as in claim 54, wherein said open end of said first elongated tubular housing has a smaller diameter than the diameter of said first elongated tubular housing.

56. A sliding piston opening means as in claim 55, wherein an applicator is affixed to said open end of said second elongated tubular housing.

57. A sliding piston opening means comprising:

an elongated tubular housing with an open end and a sealed end;

a length of tube with a cylindrical wall with one end affixed to the open end of said elongated tubular housing and an opening on the cylindrical wall near the other end; and

a sliding piston with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube and movable from a first closed position to a second open position;

wherein a fluid is enclosed within the elongated tubular housing near the sealed end and enclosed by said sliding piston opening means thereby sealing the fluid within the compressible elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the compressible elongated tubular housing to urge the sliding piston to open a fluid path from the fluid to the opening at said end of said length of tube.

58. A sliding piston opening means as in claim 57, wherein said sliding piston has an elliptical shaped profile.

59. A sliding piston opening means as in claim 57 or 58, wherein said end of said length of tube with the opening is covered with an applicator.

60. A sliding piston opening means comprising:

an elongated tubular housing with an open end and a sealed end;

a length of tube with a cylindrical wall with a first open end and a second open end and two openings through said cylindrical wall affixed to the open end of said elongated tubular housing at two seal rings with said two openings disposed between the two seal rings; and

a sliding piston with a sealing diameter approximately that of the inside diameter of the length of tube disposed within said length of tube and movable from a first closed position to a second open position;

wherein a fluid is enclosed within the elongated tubular housing near the sealed end and enclosed by said sliding piston opening means thereby sealing the fluid within the elongated tubular housing whereby the sliding piston opening mean is operated by squeezing the elongated tubular housing to urge the sliding piston to open a fluid path from the fluid through the first open end to the second open end of said length of tube.

61. A sliding piston opening means as in claim 60, wherein said sliding piston has an elliptical shaped profile.

62. A sliding piston opening means as in claim 60 or 61, wherein said second open end of said length of tube is covered with an applicator.